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ABSTRACT

In response to a directive of the West Virginia Board of Education, the State Superintendent of Schools prepared this overview of student achievement in the state which reviews state level activities to enhance school conditions, and summarizes major recommendations for plans to improve student achievement. Indicators of schooling outcomes include data on the 1977 status of 1976 graduates; average Scholastic Aptitude Test scores for nine previous years; average American College Testing Program scores for nine previous years; and data on placement of vocational students in 1977. The program review discusses state level activities concerning: curriculum, special education, professional development, support services, compensatory education, libraries and other learning resources including innovative projects, child nutrition, equal educational opportunity, transportation, assessment and evaluation, facilities, energy conservation, vocational and adult education, and finance. Five priorities for the coming year are: improving mathematics achievement; improving education for the secondary years; continuing reading achievement improvement; expanding education for exceptional children; and developing a state assessment program. (Author/CTM)

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ANNUAL PLAN FOR THE IMPROVEMENT OF EDUCATIONAL ACHIEVEMENT IN WEST VIRGINIA, 1978-79

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ANNUAL PLAN FOR THE IMPROVEMENT OF EDUCATIONAL ACHIEVEMENT IN WEST VIRGINIA, 1978-79

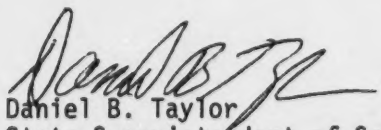
DANIEL B. TAYLOR
STATE SUPERINTENDENT OF SCHOOLS
WEST VIRGINIA DEPARTMENT OF EDUCATION

AUGUST, 1978

FOREWORD

On April 14, 1978, the West Virginia Board of Education adopted a policy which requires that every three years local school systems prepare a plan to improve student achievement. The board also stipulated that by August of each year the state department of education present to the board "an assessment of all areas of education under the control and direction of the West Virginia Board of Education, setting forth strengths and weaknesses of each and every such program together with recommendations for improving such weaknesses as may exist." The following document is submitted in fulfillment of that requirement.

The report brings together a variety of information about student achievement in West Virginia, reviews current efforts of the department of education to enhance that achievement, and summarizes programs and student achievement areas which should receive major attention during the coming year.



Daniel B. Taylor
State Superintendent of Schools

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Chapter 1

INTRODUCTION

Students attain desired skills, attitudes and knowledge as a result of the interplay of a wide variety of influences. Those influences come primarily from three sources: the home, the community and the school. Although the ways in which those three factors interact with the inherited abilities of a given student are highly complex, local school systems have been delegated the responsibility for directly and explicitly assisting the student to achieve certain kinds of outcomes. More specifically, this means that much of the formal learning process takes place as students directly interact with people and learning materials in local schools.

That learning process takes place within an environment composed of such elements as school buildings, school personnel, course offerings, transportation, and research information. Although the state board of education and the state department of education do not engage directly in the student learning process, they do influence the quality of the learning environment. Another way of saying this is that the state board and the state department help set some of the conditions under which student learning takes place.

It seems safe to assume that improvement of those conditions will in turn increase the likelihood that student learning will improve. The primary purpose of this report is to recommend ways in which those conditions can be enhanced. The recommendations are based upon

information regarding student achievement and upon the judgment of department personnel who were asked to identify the strengths and weaknesses of those learning conditions with which they work.

Chapter 2

OVERVIEW OF STUDENT ACHIEVEMENT IN WEST VIRGINIA

Student learning or achievement is measured in relation to some set of desired outcomes. Through the adoption of the Educational Goals for West Virginia, the state board of education has indicated what these outcomes should be. The seventeen goals, which were developed through a statewide survey of West Virginia citizens, cover a wide range of desired outcomes: proficiency in basic skills and higher order intellectual skills, knowledge of the substance and methods of the major disciplines, familiarity with vocational options, and a variety of attitudes and personal characteristics necessary for successful living in a contemporary world.

These goals set the basic directions for public schooling in West Virginia for years to come. The aims of the school curriculum today do not differ greatly from the basic concepts implicit in the seventeen goals. In general terms, school programs are organized around seven basic curricular areas that encourage students to be familiar with social sciences, natural sciences, humanities, mathematics, language arts and vocations, and to develop desirable social and personal characteristics.

At this time, the state department of education does not have test data to determine if students are attaining each of the seventeen goals specifically. If a state assessment program continues to

develop, such information will become available. However, the department does have information regarding student achievement in the areas of language, math, science, social studies, and some vocational programs which can provide reasonable indication of student achievement in most of the basic curricular areas. In addition, a variety of indirect evidence is available to provide a general indication of student achievement in West Virginia.

TYPES OF AVAILABLE STUDENT ACHIEVEMENT INFORMATION

In general terms, schooling prepares students for achievements in the world of work, in their social and personal lives, and in the continuation of their education. General descriptive indicators of this preparation are presented in this chapter. Two basic types of information are available. First, there is information which describes the status of students after they have completed the public schooling process. Such data includes the status of high school graduates, scores on college aptitude tests taken in the senior year of high school and job placement records. Second, there is information which describes aspects of student progress at various stages in the schooling process. This data include descriptions of student dropouts and results of the State-County Testing Program.

INDICATORS OF SCHOOLING OUTCOMES

Status of Graduates

One broad indicator of the outcomes of schooling in West Virginia is the status of the state's high school graduates. A year after graduation, approximately 40 percent are employed and 35 percent are

enrolled in post-secondary educational programs or in vocational and technical training programs. Approximately 8 percent are homemakers, 4 percent are in military service, and 13 percent are unemployed. Information on slightly over 90 percent of the 1976 graduates is given in Table 1.

Table 1

1977 Status of 1976 Graduates*

	Number	Percent**
Total Number of Graduates	24,879	
Employed	8,963	39.4
Unemployed	3,030	13.3
Homemaker	1,731	7.6
Military	969	4.3
Post Secondary Education	8,509	37.4
Apprenticeship/On-the-Job Training	322	1.4
Vocational/Technical Training	502	2.2
Deceased	30	0.1

*Based on information on 22,739 graduates.

**Total percent exceeds 100 because 1,289 graduates were both employed and enrolled in educational or training programs.

Scholastic Aptitude Test Scores

Each year over a thousand West Virginia students take the Scholastic Aptitude Test (SAT). This test is not designed to measure the achievement of students, but is, as its name indicates, a test of aptitude for college work. Private colleges are the primary users of the SAT scores.

The substantial drop in national SAT scores has been widely discussed in the press and has been the object of a number of studies by individuals and panels. Table 2 compares West Virginia and national

SAT data for the past nine years. While national verbal and mathematics scores have steadily declined during the period, West Virginia scores in both areas have fluctuated and have been as high at times during the past four years as they were in 1968-69. West Virginia mean SAT scores have consistently been above national mean scores. Both West Virginia and national n-counts (number of students taking the SAT) have declined substantially during the past nine years.

Table 2

Comparison of West Virginia and National SAT Scores

1968-1977

Year	Verbal		Math		N-Count	
	W.Va.	Nat.	W.Va.	Nat.	W.Va.	Nat.
1968-69	475	462	505	491	2,986	1,585,560
1969-70	475	460	499	488	2,772	1,505,851
1970-71	473	454	508	487	2,317	1,537,186
1971-72	469	453	499	484	1,618	1,022,820
1972-73	473	445	505	481	1,635	1,014,853
1973-74	479	444	514	480	1,745	985,115
1974-75	462	434	502	472	1,546	996,452
1975-76	466	431	510	472	1,642	999,329
1976-77	459	429	499	470	1,705	979,467

American College Testing Program

Each year over 40 percent of West Virginia's high school seniors participate in the American College Testing Program (ACT). Public colleges are the primary users of the ACT scores which help to determine an individual's potential for success as a college student. Most college-bound seniors take the tests.

During the last nine years, national mean scores have declined in all content areas tested in the ACT program except natural science. A similar picture exists in regard to West Virginia ACT scores and is given in Table 3.

West Virginia's mean English score exceeded the nation's at the beginning of the period and is now slightly below the national mean. West Virginia's mean mathematics score has been consistently below the national mean and is declining faster than the national mean. A similar situation exists in the social studies area. West Virginia's mean natural science score slightly exceeded the national mean at the beginning of the period and is now slightly below the national mean. West Virginia's composite score was approximately equal to the national mean until the 1974-75 school year when the West Virginia mean began to decline rapidly in relation to the national mean.

Table 3

Comparison of West Virginia and National ACT Scores

1968-1977

Year	English		Math		Social Studies		Natural Science		N-Count	
	W.Va.	Nat	W. Va.	Nat.	W.Va.	Nat.	W.Va.	Nat.	W. Va.	Nat.
1968-69	18.7	18.4	18.9	19.2	19.2	19.4	20.2	20.0	11,733	-- [1]
1969-70[4]	18.5	18.1	19.3	19.5	19.2	19.3	20.6	20.5	12,283	23,658[2]
1970-71	18.0	17.7	18.2	18.7	18.2	18.3	20.4	20.2	11,573	-- [1]
1971-72	17.9	17.6	18.1	18.6	18.3	18.4	20.4	20.3	9,956	-- [1]
1972-73[5]	18.1	17.8	18.3	18.8	18.0	18.1	20.5	20.5	10,752	73,744[3]
1973-74[5]	18.0	17.9	17.3	18.3	17.8	18.1	20.7	20.8	10,784	73,995[3]
1974-75[5]	17.7	17.7	16.5	17.6	17.0	17.4	20.8	21.1	10,480	71,443[3]
1975-76[5]	17.4	17.5	16.2	17.5	16.2	17.0	20.4	20.8	10,796	69,166[3]
1976-77[5]	17.5	17.7	15.9	17.4	16.5	17.3	20.5	20.9	10,471	74,356[3]

1. National N-count is not available.
2. Three percent of the total examinees.
3. Ten percent of the total examinees.
4. National means are calculated from a 3 percent sample of the scores.
5. National means are calculated from a 10 percent sample of the scores.

Placement Data for the 1977 Vocational Graduates

In the 1976-77 school year, 16,427 students, not all graduating, left vocational education programs with entry-level job skills. Approximately 90 percent (14,730) of these students participated in secondary programs, and 10 percent (1,697), in postsecondary, or adult preparatory programs.

Approximately 60 percent (8,824) of the secondary students and 70 percent (1,175) of the postsecondary students were available for employment. Table 4 gives the placement rate of students, by vocational service area and level, eight months following the end of the school year. Of those available for employment, almost 90 percent (7,710) secondary and over 90 percent (1,111) postsecondary students had jobs.

Approximately 25 percent (3,679) secondary and 4 percent (62) postsecondary students reported they were continuing their education and were not available for employment.

INDICATORS OF STUDENT PROGRESS

The State-County Testing Program

The West Virginia State-County Testing Program provides considerable information on the curricular areas of social science, language arts, science, and mathematics, which can be used in determining some of the educational needs which exist in these areas. The State-County Testing Program utilizes the "Comprehensive Tests of Basic Skills" (CTBS), a nationally norm referenced achievement test, and the "Cognitive Abilities Test," a norm referenced scholastic ability test, for collecting test data describing West Virginia student achievement in

Table 4

Placement of Vocational Students, 1977

	Number Available for Placement	Placed in Field Trained		Placed in Other Fields		Total Placement	
		Number	Percent	Number	Percent	Number	Percent
Secondary							
Agriculture	739	399	54.0	278	37.6	677	91.6
Distributive Education	715	496	69.4	146	20.4	642	89.8
Health	318	190	59.7	101	31.8	291	91.5
Home Economics-Occupational	388	158	40.7	170	43.8	328	84.5
Office	3,285	1,832	55.8	901	27.4	2,733	83.2
Technical	155	73	47.1	69	44.5	142	91.6
Industrial	3,224	1,758	54.5	1,139	35.3	2,897	89.8
State Total	8,824	4,906	55.6	2,804	31.8	7,710	87.4
Post Secondary							
Agriculture	16	11	68.8	4	25.0	15	93.8
Distributive Education	87	68	78.2	11	12.6	79	90.8
Health	393	350	89.1	33	8.4	383	97.5
Office	146	106	72.6	24	16.4	130	89.0
Technical	45	33	73.3	12	26.7	45	100.0
Industrial	486	281	57.8	176	36.2	457	94.0
State Total*	1,175	850	72.3	261	22.2	1,111	94.5

*Includes two students enrolled in Home Economics-Occupational.

grades 3, 6, 9, and 11. Because of the nature of norm-referenced tests in general, and the CTBS in particular, the State-County Testing Program has certain strengths and certain weaknesses.

The State-County Testing Program provides excellent comparative data for the areas tested and skills which are sampled. The test data allows for valid comparison between subject areas, between sampled skill areas, and for comparison of West Virginia students with the rest of the nation. Through these kinds of comparisons, relative strengths and weaknesses can be easily determined and needs identified. The CTBS, as evaluated through an extensive selection process, samples very well the skills which have been identified for learners in West Virginia, and, therefore, is viewed as being a fair indicator of attainment in the four curricular areas measured.

All nationally normed tests share some characteristics which cause data generated by them to appear weak when they are used as a detailed needs assessment instrument. The CTBS used by the State-County Testing Program shares these characteristics, and, thus, has the following weaknesses as applied to their present task: (1) The CTBS does not measure all areas of the curriculum and does not measure all of the seventeen educational goals for West Virginia. The CTBS provides no information concerning the skill or attainment level of students in physical education, art, music, foreign languages, or other areas; (2) Within the curricular areas which are measured by the CTBS, not all skills are measured, and for those skills which are measured, some are more adequately sampled than others. In the area of mathematics, for example, the CTBS does not measure advanced math skills such as those taught in trigonometry,

and there is probably an underemphasis on measurement using the metric system.

In summary, the State-County Testing Program data, part of which is given in Table 5, provide very good comparative information for identifying some of the educational needs of West Virginia students. Not all areas or objectives are tested, therefore, creating a situation in which it is difficult to identify needs in those areas not assessed. A danger of some educational needs being omitted, therefore, exists in the program.

All scores in Table 5 are national percentiles. They indicate how West Virginia mean scores compare to the national median score of 50.

Table 5

West Virginia Achievement Scores*

1977-1978

Grade	Reading	Language	Math	Basic Skills	Reference Skills	Science	Social Studies	N-Count
3	53	50	49	50	54	51	55	29,330
6	50	52	49	49	54	52	51	29,121
9	50	52	47	47	52	51	52	30,752
11	49	49	43	44	49	50	51	26,102

*Given as mean percentiles ranks.

Student Dropouts

Approximately a quarter of the students in public schools drop out prior to graduation. Drop-out rates have been stable for the three years such data have been collected. Drop-out rate is calculated using

the ratio of the number of dropouts of a given year to the sum of the number of high school graduates for that year and the number of drop-outs (i.e., number of dropouts:: number of high school graduates plus the number of dropouts).

For the 1976-77 school year, the drop-out rate was 26.9 [9117/(24879 + 9117)]. A description of these student dropouts is given in Table 6. Approximately 70 percent are 16 and 17 year-olds. Approximately a fifth dropped out in the ninth grade, a third in the tenth grade, and a quarter in the eleventh grade. Close to 70 percent were taking general courses of study, and 15 percent were taking vocational courses. They are predominantly in the lower ranks of scholastic ability and of class standing.

Table 6

Description of Student Dropouts, 1976-77*

	Number	Percent**
Sex		
Boys	5,188	57.0
Girls	3,912	42.9
Race		
Minority	350	3.8
White	8,750	96.2
Age		
Under 16	749	8.2
16	3,973	43.7
17	2,539	27.0
18	1,334	14.7
19	332	3.6
20 and over	120	1.3
Not Reported	53	0.6
Grade at Exit		
7th	231	2.5
8th	588	6.5
9th	1,724	19.0
10th	2,733	30.0
11th	2,381	26.2
12th	1,399	15.4
Not Reported	44	0.5
Program of Studies		
Academic	386	4.2
Commercial	361	4.0
General	6,217	68.3
Special	559	6.1
Vocational	1,425	15.7
Other	79	0.9
Not Reported	73	0.8
Scholastic Ability		
Top Quartile	219	2.4
Second Quartile	1,274	14.0
Third Quartile	3,099	34.0
Bottom Quartile	4,122	25.3
Not Reported	386	4.2
Estimated Rank in Class		
Top Quartile	118	1.3
Second Quartile	712	7.8
Third Quartile	2,445	26.9
Bottom Quartile	5,566	61.2
Not Reported	259	2.8

*Based on information on 9,100 dropouts out of a total of 9,117 dropouts.

**Percents may not total 100 due to rounding error.

Chapter 3

PROGRAM REVIEW

Having looked at student achievement in West Virginia in general terms, this chapter briefly reviews recent state level activity that has enhanced the conditions under which student achievement takes place.

CURRICULUM

In February 1975, the West Virginia Board of Education formally adopted seventeen educational goals for the state. Those goals, grouped within four priority areas, provide direction for the planning of curriculum in West Virginia. The goals were drawn from public surveys and reflect what citizens expect their schools to accomplish. For instance, the attention currently given to reading and other basic communication skills is related to the goals given first priority.

In addition, the goals are being used to develop a set of standards which define the expectations for the three broad segments of the school program: early childhood education, middle childhood education and adolescent, or high school education. This effort will provide a general perspective with programmatic definitions with which to view each major area of the school program. These standards will become the basis for a system of classifying each public school in the state.

Much attention of the department, and of the public, is directed at issues related to student competence. Essential competencies and and learner outcomes are being developed for each subject area of the curriculum. These are not to become mandates, but should serve to help counties plan specifically for improvements in achievement.

Much progress has been made in reading and the other basic communication skills. The staff development model that has been developed will reach the level of classroom teachers this year. Essential competencies and learner outcomes have been used to create staff development materials for county reading administrators and building principals. This particular model will be very helpful to staff development in other subject areas.

SPECIAL EDUCATION

Special education programs are now available to over 30,000 exceptional children. Standards for implementing federal law (P.L. 94-142, the Education of All Handicapped Children Act) and state law (S.B. 390) have been approved. Consultant services are offered to all counties. A new public awareness campaign is designed to make the general public aware of services that are available. There is a need for special education teachers, particularly in the low incident areas. The department staff has worked with the board of regents staff to develop a plan to meet these needs: Finally, county school systems are being monitored to insure compliance with federal and state statutes.

PROFESSIONAL DEVELOPMENT

A major strength of department activities is the approval of teacher preparation programs in the colleges. Approval is based on established written standards for each of the curricular areas, general and professional education. All graduate and undergraduate programs are evaluated and approved in accordance with these standards. Colleges must be concerned with issues of quality in the preparation of teachers.

Another major area of professional development is continuing education. West Virginia is the only state to have developed and put into operation a statewide plan. County school systems are developing continuing educational programs for all educators which will be offered on non-instructional days. These programs will help educators address areas of low student achievement. Consultant services and training materials are available for counties preparing quality continuing education programs.

SUPPORT SERVICES

The State-County Testing Program continues to make available achievement data for all third, sixth, ninth, and eleventh graders annually. School personnel have available state and county achievement data, achievement data for each building and each classroom, and achievement data for each student tested. Consultant help in developing criterion-referenced tests has been made available as staff time permits. The General Aptitude Test Battery is also available as a service to counties who make the request.

Models for early childhood, middle childhood and high school guidance programs have been developed by the guidance staff. Staff offers consultant services to counties developing guidance programs. The field-based experience requirement in guidance/counselor preparation programs has proved to be a valuable training experience for guidance personnel.

COMPENSATORY EDUCATION

With federal funds, compensatory education programs identify educationally deprived children and provide them with special educational assistance to raise their achievement to that appropriate for children of their age. These programs are placed in schools having a high number of children from low income families. Additionally, funds are made available to state institutions serving the handicapped, and neglected and delinquent children and the West Virginia Schools for the Deaf and Blind. Programs also support supplementary instructional services for children of migratory farm workers in the Eastern Panhandle section of the state. During the school year, 1977-78, approximately 43,750 students participated in the programs as follows:

33,038 remedial reading
7,940 remedial mathematics
1,708 special education
571 nonpublic schools
330 in local institutions for the neglected and delinquent

Teachers, specialists and aides participated as follows:

422 reading teachers
60 mathematics teachers
29 special education teachers
58 reading specialists
6 mathematics specialists

767 reading aides
136 mathematic aides
87 special education aides

The total direct cost for reading programs was $10,388,322, mathematics $1,538,789, special education $551,046. Involvement in compensatory education programs indicates improvement in student achievement of approximately one month for each month students participate in the program. Standardized test results have shown that such children gain approximately seven months during a ten-month instructional term when they do not receive ESEA Title I services.

LIBRARIES AND LEARNING RESOURCES, INNOVATION AND SUPPORT

Federal innovation and support programs for libraries and learning resources provide local education agencies with funds to acquire library resources, and other printed and published instructional materials and equipment, guidance, counseling and testing, and to support the local educational agencies for supplementary education centers and services, innovative projects, drop-out prevention projects and health and nutrition programs. In addition, some funds are used to strengthen the state education agency. Funds submitted to local education agencies are based upon approved projects. Since 1976, the 55 county boards of education have had slightly more than a million dollars each year that could be applied to the development and maintenance of library/media programs. According to the financial status report of ESEA Title IV-B, the following expenses were approved:

Library Resources	$498,226
Textbooks	12,820
Instructional Equipment	396,460
Minor Remodeling	4,600
Guidance and Counseling	59,337
Testing	42,800

During the school year, 1977-78, 94 projects with funding amounting to $1,153,548 were operating under ESEA Title IV-C (Innovation and Support). The projects covered many areas such as learning disabilities, preventive dentistry, secondary reading lab, instructional enrichment for gifted, weather station, developmental music, dropout prevention, math skills, nutrition education, junior high talented and gifted and corrective physical education. The evaluation reports and on-site visits to ESEA Title IV projects indicate that student achievement is taking place.

CHILD NUTRITION

Child nutrition programs provide school lunches (240,000 daily in 1,182 public schools, 148,838 of which are free and reduced) and breakfasts served to students; meals and supplements served to children attending child care centers, family day care homes and summer camps. Thirty private non-profit schools and thrity-five institutions are involved in the lunch program. In terms of achievement, it has been established that a hungry child does not learn as well as a child not hungry.

EQUAL EDUCATION OPPORTUNITY

The overall aims of equal education opportunity programs are assisting local education agencies in identifying and solving human relation problems and in providing equal educational opportunities for all pupils, the elimination of sex bias in vocational programs, and programs and services related to student rights and responsibilities.

The department has provided assistance to five local educational agencies and one non-profit group under the emergency school aid act. A purpose of this act is to "aid school children in overcoming the educational disadvantages of minority group isolation." The major activity of these agencies has been remedial services in reading and mathematics, including student to student tutoring. The agencies reported that students gained six to ten months in reading comprehension word meaning, decoding skills, mathematical computation and math concepts and application. Multicultural, non-sexist concepts are used to increase motivation and foster greater achievement in basic skills for both male and female students.

TRANSPORTATION

The purpose of the transportation office is to provide preservice and inservice training of school bus operators, as mandated by Federal Safety Standard Number 17. The implementation of this program will develop a system of regional coordinator efficiencies and of training for 55 county supervisors, as well as training each school bus operator for the safe transportation of over 300,000 pupils and private bus passengers. In terms of bus time, it is suggested that county boards of education should abide by the Comprehensive Education Program as approved by the state board of education and adjust school bus schedules so that 95 percent of bussed pupils normally spend not more than 60 minutes in route, one way, when enrolled in high school; 45 minutes, one way, in junior high school; and 30 minutes in route, one way, when enrolled in elementary school.

Students traveling to and from school in a safe situation will have a better chance to increase achievement.

ASSESSMENT AND EVALUATION

Determination of whether an education system is accomplishing what it is intended to accomplish must be made within some frame of reference. The goals for public education adopted by the West Virginia Board of Education provide both a philosophy and a foundation upon which to base assessment of the education system. The establishment of goals encourages examination of the educational process while providing direction for planning at all levels of education.

State board adoption of the goals for education was a very positive and essential step in improving learner achievement.

As competition for tax dollars to spend on education increases and educational costs increase, the demand for identifying the most successful educational programs also increases. Thus, evaluation has become an essential process in establishing educational programs that enhance student achievement. The department provides evaluation services to staff and to educators statewide. In addition, evaluation training workshops are conducted to expand educator awareness and skills in evaluation.

FACILITIES

Aggressive implementation of the Better School Buildings Amendment, passed by West Virginia voters in 1972, has resulted in a school construction program that will ultimately result in the expenditure of over one-half billion dollars by county boards of education. Presently,

53 counties have received state board of education approval of comprehensive educational facilities plans with Better School Building funds accounting for approximately 36 percent of the total. Never before in West Virginia have boards of education been able to examine the educational needs of a county and design and implement school facilities programs to meet those needs.

The Better School Building program is enabling boards of education to replace out-of-date facilities that are unsafe and not designed for contemporary education programs. But, more importantly, new and renovated schools will provide an atmosphere that will enhance the opportunities to learn and will result in greater achievement by the public school students.

ENERGY CONSERVATION

Energy conservation is a problem facing the entire country. Schools are not untouched by diminishing sources of energy and rising energy costs. For the past two winters, schools have been forced to curtail many activities and some have confronted the possibility of closing due to mandatory curtailments of energy consumption. Closing schools will obviously have a detrimental effect on learning achievement.

In order to lessen the impact of the energy problem on the schools, the department has undertaken an energy conservation program. The primary objectives of the program are to make schools as energy efficient as possible without negatively affecting the learning environment and to provide training to staff and students on maintenance of energy efficient buildings.

The indirect impact of this program on learning is extremely significant.

VOCATIONAL, TECHNICAL, AND ADULT EDUCATION

More than 52 percent of all ninth through twelfth grade students in West Virginia are enrolled in vocational education. New training programs are being prepared to specifically meet the labor needs of new industry locating in the state and of expansion of existing industry. An example of this is the recent implementation of 40-hour and 80-hour miner training programs and a solid state electronics program for the coal industry.

Competency based education (CBE) curriculum materials are being developed and implemented. At the present time, 16 CBE curricula have been developed, 13 are under development, and 4 have been borrowed from other states. Also, 32 task analysis catalogs are available from the Vocational-Technical Education Consortium of States (V-TECS). Approximately 1,215 vocational teachers have had inservice training in the use of CBE material and V-TECS catalogs.

A vocational curriculum laboratory has been established at Cedar Lakes, near Ripley. This curriculum laboratory is the acquisition and dissemination center for vocational instructional materials in the state. West Virginia is a member of the National Curriculum Network through which curriculum materials developed in other states are available to teachers in West Virginia. As of May 1978, over 1,600 requests for materials had been answered, 2,865 curriculum materials had been sent out, 1,233 educators had visited the laboratory for inservice, 51 meetings and workshops had been held, and 2,274 instructional materials

were cataloged.

A high percentage of vocational facilities in the state are modern and well equipped. From 1965 through 1978, construction was approved for 34 county vocational centers, 7 multi-county centers, and vocational additions to 20 new comprehensive high schools.

A comprehensive management information system is used for planning, evaluating and monitoring vocational education programs. Some of the data available in the system are: local educational agencies' plans for vocational education programs, vocational education student enrollment, student contact hours, termination reports, job placement reports, and equipment inventory.

Advisory committees on the local level are used in planning and evaluating vocational education. Local educational agencies are required to have advisory committees in the preparation of their annual local plan.

A comprehensive evaluation of vocational programs in all 55 counties will be completed by the end of the 1978-79 school year.

The evaluation system, utilizing process and product evaluation, is composed of four phases. The first phase is an indepth self-evaluation study prepared by appropriate school personnel for each vocational program, administration, vocational guidance, and adult basic education. The second phase is an on-site visitation held after the self-evaluation study is completed. The visitation team consists of teachers, guidance counselors, administrators, persons from business and industry, and state staff personnel. The teams are organized to review each individual program, administration, vocational guidance, and adult basic education. The third phase is writing a final report.

Appropriate department personnel compile information from the self-evaluation study, on-site visitation, and the management information system in writing the final evaluation report. The fourth phase is a follow-up procedure. During the year following the evaluation, appropriate program service personnel check all programs to determine what recommendations have been implemented and to provide needed technical assistance.

All vocational teachers meet state certification requirements, and most teachers participate in some type of inservice training provided by the department. Inservice and professional development activities for teachers, as well as local vocational administrators and guidance counselors, include annual vocational and adult education conferences, and summer and fall institutes which cover a wide variety of topics.

Research and exemplary activities are used to improve effectiveness and efficiency of instructional programs. For example, research is presently being conducted on the student articulation between secondary and postsecondary vocational education programs and between public school and college vocational education programs; on the effectiveness of prevocational exploration programs; on improving student recruitment and selection; on services to qualified handicapped and disadvantaged students which will enhance their success in regular vocational education programs; and on new and emerging careers and occupations in West Virginia.

Exemplary projects presently being field tested are the competency based emergency medical technician curriculum, the competency based curriculum for upgrading mine electricians in the use of solid

state controls, the supervisory training program and activities and procedures for overcoming sex bias and sex role stereotyping in a vocational education center.

Public service training programs are provided in all 55 counties. During the 1977-78 school year, approximately 7,329 persons participated in law enforcement, emergency medical technician, fire service and waste water technician programs. Vocational education provides the major portion of the skill training given to the unemployed and underemployed under CETA sponsorship.

Adult Basic Education (ABE) classes are available in every county in West Virginia. ABE provides an alternative approach for school dropouts to improve basic education skills and obtain their diplomas this way. The median school year completed by all persons over 25 in West Virginia has increased from 8.8 in 1960 to a median of 10.6 in 1970, a 20 percent increase.

Each local educational agency and the state department of education prepare an annual and long-range plan for vocational programs. This planning provides a comprehensive base for decision making at the state and local levels concerning program administration.

FINANCE

Last year, the Legislature appropriated for the 1977-78 school year $353,280,131 for all accounts under control of the state board. Historically, West Virginia has spent about three quarters of what the "average" state has spent for elementary and secondary education. In 1972-73, West Virginia spent 78 percent of the national average ($811 per pupil vs. $1,035 per pupil), and in 1976-77 the state spent

76 percent of the national average ($1,194 vs. $1,564).

Between 1970-71 and 1976-77, the relative expenditures of funds have not expanded but have declined slightly in relation to the rest of the country. In 1971, West Virginia was spending $192 less per pupil than the average state; in 1977, the state was spending $370 less. In 1971, West Virginia ranked 39th in per pupil expenditures; in 1977, the state ranked 40th. For all intents and purposes, West Virginia has continued to keep pace with other states' efforts in this regard.

However, while the state has spent between 75 percent and 78 percent of the national average, the state's wealth, as measured by per capita income, rose from 75.7 percent of the national average in 1965 to 83.3 percent of the national average in 1975. Thus, in relation to the state's wealth, West Virginia is spending considerably less now for elementary and secondary education than in earlier years.

In other words, West Virginia is just holding its own in expenditures in comparison with other states, while its income is rising considerably vis-a-vis the other states.

The returns from expenditures, in terms of student achievement, are remarkable. Although the state spends less than the national average, West Virginia students score on achievement tests close to the national average at nearly every grade and in nearly every subject.

Chapter 4

GENERAL SUMMARY OF MAJOR RECOMMENDATIONS

This final chapter summarizes the major thrusts which the department of education believes should form the basis of plans to improve student achievement during the coming year. The proposals focus upon key issues which, from a statewide perspective, seem to require immediate and long-lasting attention.

Five major thrusts are proposed. They were derived from three sources: interpretation of the state goals for education, analysis of statewide student achievement data, and a survey of the professional staff of the department which described the strengths and weaknesses of educational areas which fall under the direction of the state board of education. The proposals address themselves to improving schooling for students who are in post-elementary programs; improving achievement in mathematics and reading; providing educational opportunities for exceptional children; and developing a state assessment program which will systematically provide appropriate information for decision making.

IMPROVING MATHEMATICS ACHIEVEMENT

Statement of Need

Priority Level I of the Educational Goals for West Virginia has one goal:

> Each individual shall acquire mastery of the skills needed for reading, writing, speaking, perceiving and using numbers.

Testing data available on West Virginia students indicate that mathematics is the subject area with the lowest student achievement. This is true for each grade level tested by SCTP. Achievement scores, with the exception of third grade, show a gradual decline through most of the years for which comparative data are available. Mathematics scores on the ACT are further below the national mean than any other subject area measured. This decline has continued for four years. Essentially, the status of mathematics achievement seems, as data indicate, to have a profile not unlike that of reading achievement three years ago which has subsequently shown significant improvement. Consequently, maximum effort should be extended toward the improvement of mathematics achievement.

Proposed Plan

To alleviate the conditions in the needs statement presented above, the staff will initiate or complete the following tasks during the fiscal year:

1. Continue and complete the development of essential competencies and learner outcomes for mathematics, K-8, and initiate and complete development of math courses, 9-12.

2. Continue the preparation of staff development materials related to the use of the curriculum guides and essential competencies for math courses.

3. Initiate a mathematics task force to complete a systematic study of needs in the math section of the curriculum. The study will be modeled after that of the Reading Achievement Task Force:

4. Focus particular attention on the need to modify the mathematics program for grades 7-12 and coordinate that focus with the work of the mathematics task force and the development of new standards for the adolescent education years.

5. Work with counties to initiate diagnosis and remediation programs in mathematics as an immediate means of improving achievement.

6. Work with counties to emphasize the need for review and refinement of math skills after initial mastery.

7. Provide consultant and technical assistance services to counties which require two years of math for graduation in the design, development, implementation and evaluation of competencies and learner outcomes in the areas of consumer math or career-technical math.

8. Focus attention on math needs as continuing education programs for teachers are designed.

IMPROVING EDUCATION FOR THE SECONDARY YEARS

(Grades 7-12)

Statement of Need

State-County Testing Program (SCTP) scores indicate a consistent and significant growth in achievement of students in the elementary grades. Data indicate an evolving positive trend and an end to declining achievement scores at this level. It is reasonable to speculate that kindergarten experiences and reading improvement programs have had a positive impact on achievement scores.

The achievement levels reached in third and sixth grades, however, are not maintained through the twelfth grade. Achievement between grades six and nine has shown a consistent small decline for the past four years; achievement between grades nine and eleven has shown a consistent larger decline for the past six years.

Although no data are systematically collected on West Virginia twelfth grade students, ACT scores indicate that twelfth grade seniors maintain achievement levels approximately equal to their eleventh grade

performance, so that the decline seems to center on the secondary grades of seven through eleven.

Along with the apparent decline of student achievement during these years, there occurs a change in attitude toward school between grades six and twelve. Except for the subjects of music and vocational education, students indicate on the SCTP "subject interest ratings" that they like school subjects less in the eleventh grade than at any previous time. It is during these secondary school years, also that students become sixteen years old and legally do not have to attend school. Of the more than nine thousand students who dropped out of school in 1976-77, over 40 percent said they did so because of a "lack of interest" or "dislike of school experiences."

Finally, current scheduling practices allow eleventh grade students to complete virtually all courses required for graduation. These students are not inclined to avail themselves of other basic or enriching courses. Twelve years of schooling in some instances have become 11.5 or even 11.2 years of schooling.

Therefore, the department believes that the educational program offered for the secondary student should be declared a major priority area and that fiscal resources and staff time should be focused on improving the quality of education at these levels.

Proposed Plan

To alleviate the conditions in the needs statement presented above, the staff will initiate or complete the following tasks during the fiscal year:

1. Continue through completion the description of a new perspective for secondary education in the form of a programmatic definition.

2. Complete the revision of standards for graduation from high schools in West Virginia which define the general education requirements for all students and at the same time provide elective choices beyond the general education requirements.

3. Complete the planning of a school classification system which includes a self-study to be accomplished at the building level and which is coordinated with the self-study program of schools accredited by the North Central Association of Colleges and Schools.

4. Initiate the development of essential competencies for each subject area of the curriculum, grades 9-12, as viable guidelines for further curriculum improvement.

5. Work with counties in better using the results of the State-County Testing Program as a tool for curriculum improvement.

6. Identify the secondary years as priority areas with the county school systems and offer assistance in developing continuing education programs for teachers at these levels which are designed to address specific student needs as determined through needs assessment.

7. Conduct a statewide conference which coincides with the completion of new standards for graduation and which draws attention to a new state thrust in improving education for secondary years.

CONTINUING READING ACHIEVEMENT IMPROVEMENT

Statement of Need

In 1975, the West Virginia Board of Education made reading the number one instructional priority and approved the Program for Improving Reading Achievement. The initial thrust was for kindergarten through eighth grade.

Since 1975, the increased emphasis on improving reading achievement and the recognition by teachers that increased reading achievement is the foundation of increased achievement in all content areas

have begun to have an impact in the elementary schools. Test data from 1976 to 1978 demonstrate that reading achievement has begun to reverse its declining trend in grades three and six. Total reading achievement mean scores at third grade are significantly above the national mean. Sixth grade reading scores have stabilized and begun to improve slightly.

The Program for Improving Reading Achievement has not been expanded into a comprehensive system for improving reading achievement from kindergarten through grade twelve. Only grades K-8 have received emphasis during the last three years. That part of the program has had significant impact on county reading administrators, principals, teachers, and learners as evidenced by state-county test results. However, the full impact of the program is yet to materialize. Since the reading program, K-8, has evidenced success in improved reading achievement, it is important that the early grade level successes be maintained and maximized to carry over into the secondary grades.

The state department of education must be planning for future program development; areas of need in reading remain at all levels, but with the greater need at the secondary level. An extension and continued emphasis on the program would allow for reading program development at these levels and subsequent improvement in all content areas.

Proposed Plan

To continue the improvement in the area of reading, the staff will initiate or complete the following tasks during the fiscal year:

1. Continue reading as a major instructional priority for program continuity.

2. Concentrate on reading instructional improvement from grades 7-12 through staff development processes and the development of appropriate reading materials.

3. Emphasize reading improvement techniques in all content areas.

4. Develop reading techniques for students with specific needs.

5. Provide reading curriculum development processes for the middle and secondary schools.

EXPANDING EDUCATION FOR EXCEPTIONAL CHILDREN

Statement of Need

Statewide progress has been made toward establishing and maintaining special educational programs for all exceptional children (including the handicapped and the gifted) between the ages of 5 and 23. The underlying force for these efforts is contained in the state school code, §18-20-1, and in federal legislation, P.L. 94-142, the Education of All Handicapped Children Act. Though over 30,000 exceptional children are being served, the full educational opportunities goal for all handicapped children and full educational services for gifted children have not been reached. Needs still exist in the areas of child identification, evaluation, placement and instruction. Data compiled by monitoring teams indicate that the areas of procedural safeguards, individualized education programs, establishment of additional programs for both the handicapped and gifted, services in the least restrictive environment, protection in evaluation, a comprehensive system of personnel development, comprehensive program evaluation and the collection, maintenance and disclosure of student data are all points of concern that must be treated if appropriate special education services are to be provided to all exceptional children.

Available data show a steady, significant growth in the additional number of children served and the number of direct and ancillary services that have been initiated for exceptional children. However, gaps in a continuum of services from early childhood through adolescent education still exist for most categorical program areas and programmatic problems are still attendant to the existing services and programs.

Therefore, the department believes that specific attention in the form of fiscal resources and staff time should be focused on five areas:

1. Child identification - A need exists to complete the implementation of the public awareness campaign.

2. Evaluation - A need exists to provide more complete comprehensive evaluation services.

3. Placement - A need exists to fully implement formal placement procedures in assigning exceptional children within a school program.

4. Instruction - A need exists to establish and maintain the special education and/or related services that are needed to develop and implement appropriate individualized education programs for both handicapped and gifted.

5. Comprehensive personnel development - A need exists to provide for the professional development of regular education personnel to work with exceptional children and to provide for the preparation of special education personnel in areas of shortage.

Proposed Plan

To alleviate the conditions in the needs statement presented above, the staff will initiate or complete the following tasks during the fiscal year:

1. Implement a state level child identification system and assist county boards of education in implementing local awareness campaigns.

2. Complete the preparation of program standards which define the requirements for establishing categorical programs.

3. Aid counties in initiating training programs for hearing officers and surrogate parents.

4. Support the efforts of continuing education to assist county school systems to provide inservice training that better meets the needs of all educators.

5. Assist county school systems in the recruitment of qualified and certified personnel to conduct comprehensive evaluation of exceptional children.

6. Initiate a revision of the essential competencies required for teachers of exceptional children.

7. Initiate the development of interagency agreements for uniform processing of exceptional children entering in and exiting from programs of those agencies.

8. Initiate the development of interagency agreements which delineate the responsibility for selected types of service to exceptional children.

9. Continue administrative and comprehensive monitoring of county school systems and other participating agencies.

10. Initiate the development of guidelines to assist county school systems in the development of placement procedures that comply with state and federal regulations.

11. Continue to assist counties in the development of individual educational programs.

12. Continue to support the initiation and growth of programs for both the handicapped and gifted.

DEVELOPING A STATE ASSESSMENT PROGRAM

Statement of Need

The essential ingredient in planning improvements in student achievement is to know in rather precise terms what students are to learn. Although the Educational Goals for West Virginia have provided general direction for such planning efforts, specific student outcomes have yet to be established in all areas. There is a clear need to develop those learning objectives as part of a state assessment program.

Once those objectives have been planned, the next step is to determine if students are achieving them. Under present circumstances, student achievement information in six curricular areas is available. It is evident that the state currently does not have the capability to determine if all seventeen state goals are being achieved.

The department, therefore, believes that the implementation of an assessment program should be declared a major priority, and that fiscal resources and staff time should be focused on this effort.

Proposed Plan

To alleviate the conditions in the needs statement presented above, the staff will initiate or complete the following:

1. Recommend that the need for an assessment program be recognized by the West Virginia Board of Education.
2. Complete the process of interpreting or further defining the Educational Goals for West Virginia into sub-goals and general objectives. This activity will involve committees composed of persons from across the state.
3. Develop and administer instruments to measure student performance in the various goal areas not now measured, such as music, art, physical education.
4. Assemble data on home, school and community variables believed to be related to student performance in the goal areas.
5. Analyze relationships between home, school and community variables and student performance measures and generate appropriate assessment reports.

The implementation of an assessment program will require more than one year. The interpretation of the goals into sub-goals and objectives will take approximately one year. The measurement and analysis parts of the program can be phased in over a period of years. A gradual increase in the measurement and analysis efforts would permit

cost-effective procedures to be developed before large expenditures are required.